

What is claimed is:

1. A diaphragm pump, having a diaphragm coupled to a wobble plate, the diaphragm and the wobble plate each having a front surface disposed so as to face the other, the diaphragm pump characterized in that the coupling comprises:

a post (11) protruding from the front surface of the wobble plate and at least partially surrounded by a collar (11a); and

a pin (22) protruding from the front surface of the diaphragm, the pin (22) having a recess (22a) for mating with the post (11), and having an outer portion (22b) surrounding the recess (22a) and able to resiliently deform so as to squeeze through the collar (11a) when the pin (22) is pushed onto the post (11).

2. A diaphragm pump as in claim 1, wherein the outer portion (22b) of the pin includes a locking feature (22c) for holding the pin (22) on the post (11) when the pin (22) is pushed onto the post (11).

3. A diaphragm pump as in claim 1, further characterized in that the pin (22) and the diaphragm are made from respective different thermoplastic materials, and the pin (22) is made from a harder material than the diaphragm.

4. A diaphragm pump as in claim 3, wherein the respective different thermoplastic materials are from the same family of thermoplastic materials.

5. A diaphragm pump as in claim 1, further characterized in that the pin (22) is formed so as to have one or more ring features (22d) along a bonding area between the pin (22) and the diaphragm.

6. A method for use in making a diaphragm pump having a

diaphragm coupled to a wobble plate, the diaphragm and the wobble plate each having a front surface disposed so as to face the other, the method characterized by:

5 providing a post (11) protruding from the front surface of the wobble plate and at least partially surrounded by a collar (11a); and

10 providing a pin (22) protruding from the front surface of the diaphragm, the pin (22) having a recess (22a) for mating with the post (11), and having an outer portion (22b) surrounding the recess (22a) and able to resiliently deform so as to squeeze through the collar (11a) when the pin (22) is pushed onto the post (11).

15 7. A method as in claim 6, wherein the outer portion (22b) of the pin includes a locking feature (22c) for holding the pin (22) on the post (11) when the pin (22) is pushed onto the post (11).

20 8. A method pump as in claim 6, further characterized in that the pin (22) and the diaphragm are made from respective different thermoplastic materials, and the pin (22) is made from a harder material than the diaphragm.

9. A method pump as in claim 8, wherein the respective different thermoplastic materials are from the same family of thermoplastic materials.

25 10. A method pump as in claim 6, further characterized in that the pin (22) is formed so as to have one or more ring features (22d) along a bonding area between the pin (22) and the diaphragm.